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- (a) placing a light source in relation to said planar array so as to direct a beam of light of a first wavelength toward said selected one of said dichroic beamsplitters so as to reflect said beam along said common optical pathway and
- (b) placing a light detector in relation to said planar array so as to receive light that passes from said common optical pathway through said selected one of said dichroic beamsplitters.

REMARKS

Claims 2-13 are patterned on claims 1-15 of U.S. Patent No. 6,309,078, and they are presented to provke an interference with that patent for the reasons set forth in the 37 CFR 1.607 request filed concurrently herewith.

Respectfully submitted,

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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

JOŠKE APPLICATION OF TEFFREY A. STUCKEY

: GROUP ART UNIT: 2878

SERIAL NO: 09/988,880

: EXAMINER: (Unassigned)

FILED: November 19, 2001

FOR: RAPIDLY-CHANGING DICHROIC

BEAMSPLITTER

37 CFR 1.607 REQUEST FOR AN INTERFERENCE WITH A PATENT

ASSISTANT COMMISSIONER FOR PATENTS WASHINGTON, D.C. 20231

SIR:

I. <u>37 CFR 1.607(a)(1)</u>

The patent is U.S. patent No. 6,309,078 issued October 30, 2001 and naming Dromaretsky et al. as inventors. The assignee at issue was Axon Instruments, Inc.

II. 37 CFR 1.607(a)(2)

Applicant proposes the following count, which is in the format approved by the Commissioner in Orikasa v. Oonishi, 10 USPQ2d 1996, 2003 (Comm'r 1990), and Davis v. Uke, 27 USPQ2d 1180, 1188 (Comm'r 1993):

Claims 1-15 in the Dromaretsky et al. patent

OR

Claims 2-13 in the Stuckey application.

It should particularly be noted that, pursuant to the Commissioner's opinion in Orikasa, it is appropriate to use a count of this type where the recited claims are in different statutory classes so long as the subject matter recited in the various claims is not patentably distinct.

III. 37 CFR 1.607(a)(3)

All 15 claims in the Dromaretsky et al. patent correspond to the proposed count. Indeed, the proposed count includes all of the claims in that patent.

IV. 37 CFR 1.607(a)(4)

Claims 2-13 presented in the 37 CFR 1.607(a)(4) amendment submitted herewith correspond to the proposed count. Indeed, the proposed count includes all of the claims in that group of claims.

V. <u>37 CFR 1.607(a)(5)</u>

The terms of the application claims identified as corresponding to the proposed count and not previously in the application can be applied to the disclosure of the application as follows:

Terms of the Claims

Application to the Disclosure of the Application

2. A beamsplitter changer, comprising:

Para. 0007

(a) a wheel having a planar reference surface passing there through and providing support at respective planar positions for a plurality of dichroic beamsplitters whose respective optical axes are perpendicular to said planar reference

Para. 0007; Figs. 1 and 2 wheel 13; Fig. 3 planar surface 52; Fig. 3 dichroic beamsplitters 61-65;

surface, said wheel being disposed so that said planar reference surface is oblique to a common optical pathway; and Fig. 1 common pathway between sample 15 and the wheel 13;

(b) a motor connected to said wheel for rotating said wheel in said planar reference surface so as to move said dichroic beamsplitters into and out of said common optical pathway. Para. 0016; Fig. 1 motor 17.

3. The beamsplitter changer of claim 2, wherein said wheel comprises a sheet of material have a plurality of apertures therethrough for receiving a respective one said dichroic beamsplitters.

Para. 0014; Fig. 3 items 61-65 received in apertures in planar surface 52.

4. The beamsplitter changer of claim 3, wherein said wheel is circular.

Fig. 3 planar surface 52.

5. The beamsplitter changer of claim 2, wherein the angle between said common optical pathway and said reference surface is substantially about 45 degrees.

Para. 0017; Figs. 1 and 2 wheel 13 and pathway between sample 15 and wheel 13.

6. The beamsplitter changer of claim 2, wherein said motor is adapted to rotate said mirror holder a selected angular amount.

Para. 0016 lines 1-2.

7. The beamsplitter changer of claim 2, further comprising a plurality of said dichroic beamsplitters supported by said wheel, said dichroic beamsplitters, when moved into said common optical pathway by said motor, splitting said common optical pathway into a first alternative pathway and a second alternative pathway depending on the wavelength of light propagating along said common optical pathway.

Para. 0005; Para. 0014; Para. 0016.

8. The beamsplitter changer of claim 7, wherein the angle between said

and wheel 13; first alternate pathway is between the light square 12 and the wheel 13; the second alternate pathway is between the wheel 13 and the camera 16.

Fig. 1 common pathway between sample 15

Para. 0017; Fig. 1 wheel 13 is mounted at a 45° angle to the common pathway between the sample 15 and the wheel 13.

common optical pathway and said reference surface is substantially about 45 degrees.

- 9. The beamsplitter changer of claim 7, further comprising a light source disposed so as to propagate light along said first alternative optical pathway toward said beamsplitter changer, said light source producing a first wavelength of light selected to excite fluorescence emission from a sample of material placed in said common optical pathway, said dichroic beamsplitters reflecting said first wavelength of light while passing respective emission wavelengths of light along said second alternative pathway.
- 10. A method for selecting a dichroic beamsplitter for splitting a common optical pathway into two distinct optical pathways based on wavelength, said method comprising the steps of:
- (a) providing in a planar array a plurality of dichroic beamsplitters having respectively distinct light transmission characteristics, each said dichroic beamsplitter having a reflective surface substantially parallel to said planar array;
- (b) placing said planar array in the common optical pathway so that the plane of said planar array is askew thereto; and
- (c) rotating said planar array in the plane thereof so as to position a selected one of said dichroic beamsplitters in said common optical pathway.
- 11. The method of claim 10, wherein the plane of said planar array is

Para. 0005 and 0013; Fig. 1 light source 12 directs light toward beamsplitter changer 13;

Fig. 1 first wavelength of light from light source 12 reflected by beamsplitter 13; emission wavelength passed through the beamsplitter 13 to camera 16 along the second alternative pathway.

Para. 0005 and 0013;

Para. 0014; Figs. 1-3 plurality of dichroic beamsplitters 61-65 mounted in planar surface 52;

Para. 0015; Fig. 1 item 13;

Para. 0016; Fig. 1 motor 17.

Para. 0017; Figs. 1 and 2 item 13.

disposed substantially at 45 degrees to the common optical pathway.

12. The method of claim 10, wherein said rotating is continuous so as to position said plurality of dichroic beamsplitters in the common pathway sequentially.

Para. 0016.

- 13. The method of claim 10, and further comprising the steps of:
- (a) placing a light source in relation to said planar array so as to direct a beam of light of a first wavelength toward said selected one of said dichroic beamsplitters so as to reflect said beam along said common optical pathway and

Para. 0012 and 0013; Fig. 1 item 12;

(b) placing a light detector in relation to said planar array so as to receive light that passes from said common optical pathway through said selected one of said dichroic beamsplitters.

Para. 0012 and 0013; Fig. 1 item 16.

VI. <u>37 CFR 1.607(a)(6)</u>

37 CFR 1.607(a)(6) is irrelevant since this request and the accompanying 37 CFR 1.607(a)(4) amendment are being submitted prior to one year from the date on which the Dromaretsky et al. patent was granted.

VII. REQUEST FOR THE BENEFIT OF THE FILING DATES OF APPLICANT'S PRIORITY APPLICATIONS

Applicant claims priority under 35 USC 120 based upon PCT/US01/42957 application, which was filed on November 16, 2001, and under 35 USC 119(e) based upon provisional application 60/249,626, filed November 17, 2000. Applicant is entitled to the benefit of the

filing dates of each of his earlier filed applications for interference purposes if the count reads on at least one adequately disclosed embodiment in the earlier application. Assuming that the examiner recommends to the board applicant's proposed count, applicant clearly meets that standard. That this is so can be demonstrated as follows:

Terms of the Claims

Application to the Disclosure of the PCT/US01/42957 <u>Application</u>

- 2. A beamsplitter changer, comprising:
- Page 7, lines 3-7; Fig. 1 item 13;
- (a) a wheel having a planar reference surface passing there through and providing support at respective planar positions for a plurality of dichroic beamsplitters whose respective optical axes are perpendicular to said planar reference surface, said wheel being disposed so that said planar reference surface is oblique to a common optical pathway; and
- Page 7 lines 4-9; Page 7 line 28 page 8 line 1; page 8 line 30-page 9 line 1;
- Page 10 lines 2-5.

Fig. 3 items 61-65;

- (b) a motor connected to said wheel for rotating said wheel in said planar reference surface so as to move said dichroic beamsplitters into and out of said common optical pathway.
- Page 7 lines 21-27.; page 8 line 30-page 9 line 1; Fig. 1 motor 17.
- 3. The beamsplitter changer of claim 2, wherein said wheel comprises a sheet of material have a plurality of apertures there through for receiving a respective one said dichroic beamsplitters.
- Page 10 lines 7-17; Figs. 1-3 item 52.

- 4. The beamsplitter changer of claim 3, wherein said wheel is circular.
- Fig. 3; page 10 lines 9-10.

¹Weil v. Fritz, 572 F.2d 856, 865-66 n.16, 196 USPQ 600, 608 n.16 (CCPA 1978).

- 5. The beamsplitter changer of claim 2, wherein the angle between said common optical pathway and said reference surface is substantially about 45 degrees.
- 6. The beamsplitter changer of claim 2, wherein said motor is adapted to rotate said mirror holder a selected angular amount.
- 7. The beamsplitter changer of claim 2, further comprising a plurality of said dichroic beamsplitters supported by said wheel, said dichroic beamsplitters, when moved into said common optical pathway by said motor, splitting said common optical pathway into a first alternative pathway and a second alternative pathway depending on the wavelength of light propagating along said common optical pathway.
- 8. The beamsplitter changer of claim 7, wherein the angle between said common optical pathway and said reference surface is substantially about 45 degrees.
- 9. The beamsplitter changer of claim 7, further comprising a light source disposed so as to propagate light along said first alternative optical pathway toward said beamsplitter changer, said light source producing a first wavelength of light selected to excite fluorescence emission from a sample of material placed in said common optical pathway, said dichroic beamsplitters reflecting said first wavelength of light while passing respective emission wavelengths of light along said second alternative pathway.
- 10. A method for selecting a dichroic beamsplitter for splitting a common optical pathway into two distinct optical

Page 7 line 28 - page 8 line 1; page 10 lines 3-5; Fig. 1 item 13.

Page 7 lines 28-30; page 8 line 30-page 9 line 1; Fig. 1 motor 17.

Page 12 lines 8-13; Figs. 1-3 items 61-65.

Fig. 1 the first alternative pathway is from light source 12 to wheel 13 and the second alternative pathway is from the wheel 13 to the camera 16.

Page 10 lines 3-6; Fig. 1 wheel 13.

Page 11 lines 9-23; Fig. 1 light source 12.

Page 11 lines 9-28; Fig. 1 item 13;

pathways based on wavelength, said method comprising the steps of:

(a) providing in a planar array a plurality of dichroic beamsplitters having respectively distinct light transmission characteristics, each said dichroic beamsplitter having a reflective surface substantially parallel to said planar array;

Page 10 lines 7-18; Figs. 1-3 dichroic beamsplitters 61-65 in planar surface 52;

(b) placing said planar array in the common optical pathway so that the plane of said planar array is askew thereto; and

Page 9 lines 28-30; Figs. 1 and 2; wheel 13;

(c) rotating said planar array in the plane thereof so as to position a selected one of said dichroic beamsplitters in said common optical pathway.

Page 11 lines 29-30.

11. The method of claim 10, wherein the plane of said planar array is disposed substantially at 45 degrees to the common optical pathway.

Page 10 lines 3-6; Figs. 1-2 wheel 13.

12. The method of claim 10, wherein said rotating is continuous so as to position said plurality of dichroic beamsplitters in the common pathway sequentially.

Page 12 lines 8-11 and 23-26.

13. The method of claim 10, and further comprising the steps of:

ce in Page 11 lines 14-23; Fig. 1 light source 12;

(a) placing a light source in relation to said planar array so as to direct a beam of light of a first wavelength toward said selected one of said dichroic beamsplitters so as to reflect said beam along said common optical pathway and

(b) placing a light detector in relation to said planar array so as to receive light that passes from said common optical pathway through said selected one of said dichroic beamsplitters.

Page 11 lines 22-23; Fig. 1 camera 16.

Terms of the Claims

Application to the Disclosure of Provisional Application 60/249,626

2. A beamsplitter changer, comprising:

Lines 1-2.

(a) a wheel having a planar reference surface passing there through and providing support at respective planar positions for a plurality of dichroic beamsplitters whose respective optical axes are perpendicular to said planar reference surface, said wheel being disposed so that said planar reference surface is oblique to a common optical pathway; and

Lines 29-30; lines 38-41; Figs. 1-2; dichroic wheel 13;

Fig. 3 plurality of round dichroic

Figs. 1 and 2;

beamsplitters shown

(b) a motor connected to said wheel for rotating said wheel in said planar reference surface so as to move said dichroic beamsplitters into and out of said common optical pathway. Lines 30-34; Fig. 1 motor connected to dichroic wheel.

3. The beamsplitter changer of claim 2, wherein said wheel comprises a sheet of material have a plurality of apertures there through for receiving a respective one said dichroic beamsplitters.

Lines 29-30, Figs. 1-3.

4. The beamsplitter changer of claim 3, wherein said wheel is circular.

Fig. 3.

5. The beamsplitter changer of claim 2, wherein the angle between said common optical pathway and said reference surface is substantially about 45 degrees.

Lines 38-41; Figs. 1-2.

- 6. The beamsplitter changer of claim 2, wherein said motor is adapted to rotate said mirror holder a selected angular amount.
- 7. The beamsplitter changer of claim 2, further comprising a plurality of said dichroic beamsplitters supported by said wheel, said dichroic beamsplitters, when moved into said common optical pathway by said motor, splitting said common optical pathway into a first alternative pathway and a second alternative pathway depending on the wavelength of light propagating along said common optical pathway.
- 8. The beamsplitter changer of claim 7, wherein the angle between said common optical pathway and said reference surface is substantially about 45 degrees.
- 9. The beamsplitter changer of claim 7, further comprising a light source disposed so as to propagate light along said first alternative optical pathway toward said beamsplitter changer, said light source producing a first wavelength of light selected to excite fluorescence emission from a sample of material placed in said common optical pathway, said dichroic beamsplitters reflecting said first wavelength of light while passing respective emission wavelengths of light along said second alternative pathway.
- 10. A method for selecting a dichroic beamsplitter for splitting a common optical pathway into two distinct optical pathways based on wavelength, said method comprising the steps of:
- (a) providing in a planar array a plurality of dichroic beamsplitters

Lines 31-33; lines 38-41.

Lines 2-6; lines 29-30; Figs. 1-3;

Fig. 3 plurality of round dichroic beamsplitters shown; Figs. 1-2.

Lines 38-41; Figs. 1-2 dichroic wheel.

Figs. 1-2.

Lines 1-2.

Lines 29-34; lines 38-43; Fig. 1-3;

having respectively distinct light transmission characteristics, each said dichroic beamsplitter having a reflective surface substantially parallel to said planar array;

Fig. 3 plurality of round dichroic beamsplitters shown.

(b) placing said planar array in the common optical pathway so that the plane of said planar array is askew thereto; and

Lines 38-41; Figs. 1-2;

(c) rotating said planar array in the plane thereof so as to position a selected one of said dichroic beamsplitters in said common optical pathway.

Lines 32-34; Figs. 1 and 2 dichroic wheel.

11. The method of claim 10, wherein the plane of said planar array is disposed substantially at 45 degrees to the common optical pathway.

Line 38.

12. The method of claim 10, wherein said rotating is continuous so as to position said plurality of dichroic beamsplitters in the common pathway sequentially.

Lines 6-8; lines 32-35; lines 43-46.

13. The method of claim 10, and further comprising the steps of:

(a) placing a light source in relation to said planar array so as to direct a beam of light of a first wavelength toward said selected one of said dichroic beamsplitters so as to reflect said beam

along said common optical pathway and

(b) placing a light detector in relation to said planar array so as to receive light that passes from said common optical pathway through said selected one of said dichroic beamsplitters.

Lines 9-13; Figs. 1-2.

Lines 9-13; lines 42-44; Figs. 1-2 camera

VIII. 37 CFR 1.608

37 CFR 1.608 is irrelevant since the effective filing date of this application precedes the effective filing date of the Dromaretsky et al. patent.

For the foregoing reasons, the party Stuckey should be the senior party in the requested interference.

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